

Capacity is the maximum number of vehicles that can pass over a given section of roadway during a given time period under prevailing roadway and traffic conditions. Many factors contribute to the capacity of a roadway, including:

- ❑ Geometry of the road, including number of lanes, horizontal and vertical alignment, and proximity of perceived obstructions to safe travel along the road;
- ❑ Typical users of the road, such as commuters, recreational travelers, and truck traffic;
- ❑ Access control, including streets and driveways, or lack thereof, along the roadway;
- ❑ Development of the road, including residential, commercial, and industrial developments;
- ❑ Number of traffic signals along the route;
- ❑ Peaking characteristics of the traffic on the road;
- ❑ Characteristics of side-roads feeding into the road; and
- ❑ Directional split of traffic or the percentages of vehicles traveling in each direction along a road at any given time.

The relationship of travel demand volume to roadway capacity determines the level-of-service (LOS) of a roadway. Six distinct levels-of-service are possible, with letter designations ranging from LOS A, which represents the best operating conditions, to LOS F, which represents the worst operating conditions. LOS D indicates “practical capacity” of a roadway, or the capacity at which the public begins to express dissatisfaction. The six levels-of-service are illustrated in **Figure 6**.